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THICKENERS

SLUDGE DEWATERING



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WHAT IS IT?

Compact equipment used for sludge dewatering. This equipment is capable of dewatering and thickening sludge from urban and industrial wastewater treatment plants, with low electrical consumption, considerably reducing operating costs. Thanks to its new technology of mobile and fixed rings, adequate pressure and extension of the dewatering zone, this equipment is able to treat low concentration and oily sludge with greater efficiency and energy savings. To improve the efficiency of the equipment, the sludge, before entering the equipment, must be mixed in a tank with a flocculant to make the sludge homogeneous. The unique pre-thickening device allows a wide solids concentration ranging from 5000 mg/l to 50,000 mg/l.

HOW IT WORKS

The sludge, once homogenised in the flocculation tank, flows into the inner chamber of the unit and is pushed towards the discharge end. The increasingly narrow passage of the propeller shaft causes the pressure on the sludge to become higher and higher, causing the water to separate from the sludge and flow out of the space between the movable and fixed rings. The movement of the moving rings and the fixed rings cleans the space between them and prevents the machine from blocking. The filtered sludge cakes are pushed forward by the shaft and finally discharged at the end.

The multiplate screw press allows continuous operation without blockages due to the self-cleaning movement of the self-cleaning fixed and movable rings. Therefore, it is especially good in oily sludge with excellent performance. In addition, no additional water is required for high pressure cleaning, so no odours or secondary contamination will occur.



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TECHNICAL ADVANTAGES

Gravity thickening problems disappear and highly efficient thickening is achieved.

Flocculation and thickening at the same time reduce the subsequent dewatering pressure.

Adjust the expansion valve so that the sludge is in the best condition for dewatering.

Fixed and movable plates replace the filter cloth, self-cleaning, non-clogging, easy to dewater oily sludge.

The dewatering efficiency of the equipment is based on the internal pressure of the filter chamber and the rotation speed. This speed is so slow, 2-4 r/min that the energy consumption is very low as 0.01-0.1 bv/h/kg-DS. Only 1/8 of the filter press and 1/20 of the centrifugal machines.

This equipment can directly treat the sludge from the aeration tank and the secondary sedimentation tank so that the sludge thickening tank is no longer necessary. Therefore, the construction cost of civil work is reduced, and the problem of phosphorus release is avoided.

It can operate 24 hours continuously with very low maintenance, no highly skilled manpower is required for maintenance.

CAPACITIES.

The capacity range of this equipment is very high with models from 4 to 960 kg-DS/hr dry solids capacity.

We can offer you customised solutions for sludge dewatering for different industries, such as petrochemical industry, paper industry, amyloid, chemical industry, pectin wastewater, inorganic material etc.

